

Notice of Allowability

Application No.

09/960,401

Examiner

Wesley D. Markham

Applicant(s)

YONEHARA, HISATOMO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 1/31/2005.
2. ☒ The allowed claim(s) is/are 1-3 and 9-22.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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DETAILED ACTION / ALLOWANCE

Response to Amendment

1. Acknowledgement is made of the amendment filed by the applicant on 1/31/2005, in which independent Claim 1 was amended, Claims 4 – 8 were canceled, and Claims 19 – 22 were added. **Claims 1 – 3 and 9 – 22** are currently pending in U.S. Application Serial No. 09/960,401, and an Office action on the merits follows.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) (i.e., a certified copy of Japanese priority document 2000-294108, filed on 9/27/2000), which papers have been placed of record in the file. Additionally, the examiner has fully reviewed the certified English-language translation of the aforementioned priority document and notes that the subject matter of Claims 1 – 3 and 9 – 22 is fully supported by the priority document.

Allowable Subject Matter

3. Claims 1 – 3 and 9 – 22 are allowed.
4. The following is an examiner's statement of reasons for allowance: The instant application, as embodied by sole independent Claim 1, is drawn to a method of producing a color filter. The method comprises forming pixels on a transparent substrate by ink-jet printing a colored composition comprising (a) an amino resin having a carboxyl group and/or a phenolic hydroxyl group, (b) a pigment, (c) an

organic solvent, and (d) a polyfunctional (meth)acrylate and/or a polyfunctional maleimide compound having a photopolymerizable functional group, photocuring the pixels, and then heat-curing the photocured pixels. The prior art of record, including Marumoto et al. (USPN 6,277,529), Kashiwazaki et al. (USPN 5,552,192), Kashiwazaki et al. (USPN 6,084,006), Kashiwazaki et al. (USPN 6,203,604), Akahira et al. (USPN 6,224,205), and Matijevic et al. (USPN 5,871,872), generally teaches ink-jet printing colored compositions onto a transparent substrate to form a color filter, and Kashiwazaki et al. (USPN 5,552,192) teaches that, in the art of manufacturing a color filter by ink-jet printing, it is known to first partially cure the colored pixels by light/UV irradiation and then to finish curing the colored pixels by a heat treatment after the deposition of a protective layer. However, the aforementioned references, alone or in combination, do not teach or reasonably suggest (1) ink-jet printing the applicant's specifically-claimed composition (e.g., comprising (a) an amino resin having a carboxyl group and/or a phenolic hydroxyl group, (b) a pigment, (c) an organic solvent, and (d) a polyfunctional (meth)acrylate and/or a polyfunctional maleimide compound having a photopolymerizable functional group), or (2) using the claimed two-step curing process (i.e., photocuring the pixels, and then heat-curing the photocured pixels) in conjunction with the aforementioned claimed composition. Obayashi et al. (USPN 6,048,924) teaches an aqueous resin composition that comprises an amino resin having a carboxyl group and/or a phenolic hydroxyl group and a water-borne resin that can be combined with colorants such as pigments in order to function as an ink and can provide an

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excellent cured film by baking. However, the resin of Obayashi et al. (1) does not include a polyfunctional (meth)acrylate and/or a polyfunctional maleimide compound having a photopolymerizable functional group, and (2) is cured only by heating, not photopolymerization. As such, the prior art of record, alone or in combination, does not teach or reasonably suggest ink-jet printing the colored composition recited in independent Claim 1 to form pixels, photocuring the pixels, and then heat-curing the photocured pixels, to produce a color filter. For this reason, independent Claim 1 is allowed. Claims 2, 3, and 9 – 22 depend from independent Claim 1 and are also allowed.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley D. Markham whose telephone number is (571) 272-1422. The examiner can normally be reached on Monday - Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Wesley D Markham
Examiner
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TIMOTHY MEES
SUPERVISORY PATENT EXAMINER